

Remarks

This is in response to the non-final Office Action mailed on October 1, 2004. Claims 28, 31, and 49 are canceled without prejudice, and claims 27, 29, 30, 32, 48, 50, and 59 are amended. Claims 27, 29, 30, 32-48, and 50-59 remain pending, with claims 27, 30, 33, 36, 46, 48, 53, and 59 being independent. Reconsideration and allowance are respectfully requested for at least the following reasons.

I. Claim Rejections - 35 U.S.C. § 103

A. Shimek and Sinsley

In section 5 of the Action, claims 27-32, 36-45, 48-50, 52, 53, and 55-59 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimek, U.S. Patent No. 5,941,237, in view of Sinsley, U.S. Patent No. 6,361,725. This rejection is respectfully traversed, and reconsideration is requested.

Claim 27 recites a gas burner for a fireplace including a burner panel substantially comprising a compression molded material.

The rejection concedes that Shimek fails to disclose or suggest a compression molded material.

The rejection cites Sinsley as disclosing a compression molded material. This characterization of Sinsley is respectfully traversed.

It is respectfully asserted that Sinsley discloses a modified vacuum molding technique, not a compression molding method. The molding process disclosed in Sinsley is described generally as follows.

The process uses a textured screen with a mold body into which a slurry of synthetic mineral wool fiber is injected under pressure and then molded under increased air pressure by driving the liquid out of the mold through a plurality of apertures. Once molded, continued air pressure partially dries the formed article to low moisture content in a shortened cycle time.

Sinsley, column 1, lines 56-62 (underlining added). As detailed below, there are several reasons why the above underlined portion clearly indicates that the process disclosed by Sinsley is a vacuum molding process.

For example, Sinsley discloses using "a slurry of synthetic mineral wool fiber." Id. The slurry is described as comprising a ratio of water to solid material of approximately 2075 to 36 (or almost 98% water by weight). Sinsley, column 3, lines 3-6. Such a large water to solid material ratio is used in vacuum molding, where water including the material is forced through a porous screen to coalesce the material on the screen while allowing the water to pass through (see the general description of vacuum molding provided above). Attempting to compression mold a slurry including a water to solid material ratio of 2075 to 36 would be unsuccessful at least because the high water content would not allow the compressive forces to act on the molding composition to form an article.

In addition, Sinsley describes the disclosed molding process in more detail as follows.

An injection control valve 31 opens imparting the batch injection tank content slurry under a positive pressure range of 10-20 psi into the mold assembly 10 via a supply line 31A as best seen in FIG. 3 of the drawings, filling the mold cavity within. The injection control valve 31 is then closed and a drying control valve 32 is opened to a second source of compressed air 33. Air pressure supply to the mold assembly 10 in the range of 35 to 40 psi forces the liquid L out through the drain openings 25 within the mold base 23.

The water is driven out of the mold assembly 10 leaving the ceramic fibers collected on the molding surface 17 of the synthetic mesh 16 within. The water is captured within the retainment enclosure 20 collected and returned to a recycled water storage tank 34.

Sinsley, column 3, lines 26-40 (underlining added). As the underlined portions illustrate, the process disclosed by Sinsley includes forcing the slurry through the synthetic mesh 16, leaving fibers to collect on the surface 17 while allowing water from the slurry to escape. An alternative process illustrated at Figures 6-8 also involves forcing of a slurry through a screen mold. Sinsley, column 4, lines 35-41. Once again, these are vacuum molding techniques, albeit somewhat modified in that, instead of drawing or pulling the slurry through the mesh using vacuum pressure, the slurry is forced or pushed through the mesh. However, this does not change the fact that a slurry is being forced through a mesh to coalesce the solid material and to remove water. As noted above, in compression molding, rather than using a slurry that is passed through a screen, a molding composition is compressed under pressure (see the general description of compression molding described above).

Further, Sinsley describes the final product of the process as a "coalesce log L." See, e.g., Sinsley, column 3, lines 45-47. The term "coalesce" means, for example, "to cause to grow together, to unit, combine" or "to grow together into lumps." The Compact Edition of the Oxford English Dictionary, Vol. 1, p. 551 (1971). These definitions for the term "coalesce" are consistent with vacuum molding, in which a slurry is forced through a screen to coalesce the solid portions of the slurry on the screen while allowing the water to pass through. Therefore, the use of the phrase "coalesce log L" in Sinsley further reinforces the fact that Sinsley discloses a vacuum molding process, and not a compression molded material as recited by claim 1.

Attached at the Appendix hereto are three Declarations of David C. Lyons executed on March 4, 2002, May 20, 2004, and September 13, 2004, which establish the differences and distinct advantages of a compression molded material over other materials, such as a vacuum molded material disclosed by Sinsley.

Reconsideration and allowance of claim 27, as well as claim 29 that depends therefrom, are therefore respectfully requested for at least these reasons.

Claims 30, 36, 48, and 59 all recited a compression molded burner panel, and claim 53 recites a method including compressing an inorganic fiber within a mold. Claims 30, 36, 48, 53, and 59, as well as claims 32, 37-45, 50, 52, and 55-58 that depend respectively therefrom, should be allowable for at least reasons similar to those provided above with respect to claim 27. Reconsideration and allowance are respectfully requested.

B. Shimek and Moore

In section 6 of the Action, claims 27-32, 36-45, 48-50, 52, 53, and 55-59 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimek in view of Moore et al., U.S. Patent No. 3,758,317. This rejection is respectfully traversed, and reconsideration is requested.

i. There is No Motivation to Combine Shimek and Moore

To establish a *prima facie* case of obviousness, three basic criteria must be met: 1) suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine teachings; 2) a reasonable expectation of success; and 3) the references, when combined must teach or suggest

all the claim limitations. See In re Vaeck, 20 USPQ2d 1438 (Fed. Cir. 1991); MPEP § 2143 *et seq.*

The combination of Shimek and Moore is respectfully traversed because it is respectfully suggested that there is no motivation to combine the references for at least the following reasons.

Shimek discloses a casting technique involving the use of a castable slurry that is poured into a mold and formed into the molded articles. Shimek, col. 6, l. 56 - col. 7, l. 22. Shimek fails to disclose or suggest that it would be desirable to use other techniques to form the molded articles.

Moore discloses compositions for monolithic inorganic structures such as shaped refractories made using a variety of techniques including vacuum and pressure forming, centrifugal casting, compression molding, rotational molding, and injection molding. Moore, col. 8, ll. 42-47. Moore discloses that the shaped refractories can be used for a variety of applications, including "for household burners." Moore, col. 8, l. 69.

Although Moore discloses that the shaped refractories can be used for "household burners," there is no suggestion regarding what constitutes a household burner, or that any portion or portions of the household burner itself can be formed using the shaped refractories. One skilled in the art would therefore not be motivated to combine this disclosure in Moore with that of Shimek.

Further, the rejection states that Moore discloses that compression molding is an equivalent technique to vacuum and pressure forming techniques. This characterization of Moore is respectfully traversed. Moore simply states that the various disclosed molding techniques are "all useful" and does not suggest that the techniques are equivalent. For example, the three Declarations of David C. Lyons executed on March 4, 2002, May 20, 2004, and September 13, 2004 highlight the significant advantages associated with articles formed using compression molding over articles formed using other techniques.

It is therefore respectfully suggested that there is no motivation to combine Shimek and Moore for at least these reasons. Reconsideration and allowance of claims 27, 29, 30, 32, 36-45, 48, 50, 52, 53, and 55-59 are respectfully requested.

ii. Evidence of Secondary Considerations of Non-Obviousness Further Refutes the Obviousness Rejection

The attached Rule 132 declaration by David C. Lyons executed on February 17, 2005 ("Lyons Rule 132 Declaration") is hereby submitted to further rebut the allegations of obviousness in the Office Action. As noted in MPEP 716.01(d), "facts established by rebuttal evidence must be evaluated along with the facts on which the conclusion of a *prima facie* case was reached." In other words, "all of the competent rebuttal evidence taken as a whole should be weighed against the evidence supporting the *prima facie* case." In re Piasecki, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984). Thus, when considered against the evidence supporting the alleged *prima facie* case of obviousness (which evidence in and of itself is respectfully suggested as being insufficient as described above), it is respectfully suggested that the Lyons Rule 132 Declaration demonstrates that the rejected claims are patentable over the cited references.

Specifically, the Lyons Rule 132 Declaration explains that there was a long-felt persistent need recognized in the fireplace industry for a burner or a fireplace including a burner panel that exhibited both structural integrity and malleability to allow for the burner panel to be manipulated after forming. The Lyons Rule 132 Declaration identifies the problems associated with prior molding techniques such as vacuum molding and casting. The Lyons Rule 132 Declaration further demonstrates that burner panels including a compression molded material as recited in the rejected claims have greater strength and malleability and therefore squarely address the long-felt persistent need.

It is respectfully requested that this evidence be considered in view of the contention in the rejection that the rejected claims are obvious over the combination of Shimek and Moore. When the evidence of "secondary considerations" is weighed against the factors relating to the establishment of an alleged *prima facie* case of obviousness, it is apparent that the rejected claims are not obvious in light of the combination of Shimek and Moore. In light of the intense and long-felt need in the industry, these claims cannot be said to be obvious over the recited patents, since any such "obvious" solution would have been implemented long ago in light of the above-described long-felt need - for example, Moore issued over three decades ago.

Reconsideration and allowance of claims 27, 29, 30, 32, 36-45, 48, 50, 52, 53, and 55-59 are therefore respectfully requested.

II. Double Patenting

In section 7 of the Action, claims 27-59 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3, 5, 6, and 9-26 of U.S. Patent Appl. Serial No. 09/781,149. This rejection is respectfully traversed, and the correctness of the rejection is not conceded.

However, in the interest of moving this application into condition for allowance, attached hereto is a Terminal Disclaimer that addresses the rejection. Reconsideration and removal of the rejection are therefore respectfully requested.

III. Allowable Subject Matter

In section 9 of the Action, claims 33-35, 46, 47, 51, and 54 were noted as containing allowable subject matter. Applicants appreciate the Examiner's assistance in identifying allowable subject matter. All claims are in condition for allowance.

IV. Conclusion

The remarks set forth above provide certain arguments in support of the patentability of the pending claims. There may be other reasons that the pending claims are patentably distinct over the cited references, and the right to raise any such other reasons or arguments in the future is expressly reserved.

In view of the above amendments and remarks, Applicant respectfully requests examination and a Notice of Allowance. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Respectfully submitted,
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Attachment: Appendix